Health Care Personnel and FluMist®

Why should health care workers be vaccinated against influenza?

Influenza vaccination of health care personnel (HCP) is an employee, as well as a patient, safety issue.

- HCP are more likely than the general public to become infected with influenza.
- Vaccination of HCP has been shown to decrease absenteeism, medical visits and antibiotic use among HCP.
- People with influenza can be infectious 1 – 2 days before becoming symptomatic.
- Infected HCP with even mild or no symptoms can transmit influenza to their patients, their colleagues and their families.
- Vaccination of HCP may reduce the risk of influenza outbreaks in all settings and has been shown to significantly reduce morbidity (43% reduction in influenza-like illness) and mortality (44% reduction) among geriatric patients in long-term care facilities.

What is FluMist®?

FluMist® is a safe and effective intranasally administered, trivalent, live, attenuated influenza vaccine (LAIV). Because it is attenuated, LAIV does not typically produce symptoms related to influenza virus infection. If symptoms do occur, they are mild. FluMist® is licensed to prevent illness from influenza in healthy, non-pregnant persons aged 2 - 49 years. In clinical trials, FluMist® was 85% - 95% effective against influenza and reduced overall febrile illness and antibiotic use.

Can shedding and transmission of vaccine viruses occur with LAIV?

Available data indicate that people vaccinated with LAIV can shed vaccine viruses after vaccination, although in lower amounts than occur with wild-type influenza viruses. In rare instances, vaccine viruses can be transmitted to unvaccinated persons, however serious illness has not been reported among unvaccinated persons who have been inadvertently infected with vaccine viruses.

It is important to remember the following facts:

- People vaccinated with LAIV are much less likely to shed virus than people infected with wild-type influenza viruses.
- Because vaccine virus is highly attenuated, even if vaccine virus is shed, it is very unlikely to cause illness and the complications associated with wild-type influenza virus infection in exposed patients and other contacts.

Should health care personnel (HCP) receive LAIV?

When influenza vaccine is readily available, healthy, non-pregnant HCP younger than 50 years of age can receive either inactivated or LAIV influenza vaccine.

When there is a shortage of inactivated influenza vaccine, however, inactivated vaccine must be prioritized for those people who are at risk for serious complications from influenza, but who cannot receive LAIV because of their age or medical condition. In this case, LAIV is the vaccine of choice for HCP who do not have contraindications (see next page).

The Advisory Committee on Immunization Practices (ACIP) of the CDC endorses the use of LAIV in health care personnel.

Which health care personnel (HCP) should not receive LAIV?

Health care personnel with contraindications (see next page) should not receive LAIV.

HCP who care for severely immunocompromised patients (e.g., patients with hematopoietic stem cell transplants) during those periods *when the immunocompromised patient requires care in a protective environment* should not receive LAIV.

HCP caring for such patients should receive inactivated influenza vaccine.

The rationale for not using LAIV to vaccinate HCP caring for severely immunocompromised patients is the *theoretical* risk of transmission of vaccine virus to these patients. Untoward effects of vaccine virus in compromised patients have not been observed.

Wild-type virus influenza, however, is a well-documented and significant threat to immunocompromised patients.

HCP who receive LAIV should refrain from contact with severely immunosuppressed patients as described above for 7 days after receiving the vaccine.

HCP having contact with patients in any setting with a lesser degree of immunosuppression (e.g., HIV infection, diabetes, steroid therapy, etc.) can and should receive LAIV. This is to ensure that they do not transmit wild-type influenza virus to their patients.

The unlikely event of transmission of vaccine virus to patients would most likely result in a vaccine response and not significant infection since vaccine virus is cold-adapted and will not multiply in the lower airway. It is likely that the common respiratory viruses that cause colds would present a more significant threat to these patients.

Who can administer LAIV?

Any health care provider can administer LAIV. This includes HCP at high risk for influenza complications who cannot themselves receive LAIV (e.g., pregnant women, people with asthma, persons $\geq$ 50 years of age etc.).

The only HCP who should **not** administer LAIV are those who are so **severely** immunocompromised that they themselves require a protective environment. These persons would not be well enough to be working in a health care setting.

Neither masks nor gloves are necessary when administering LAIV.

What are contraindications to LAIV?

LAIV is currently contraindicated for the following people:

- People < 2 and $\geq$ 50 years of age
- People with chronic medical conditions that put them at risk for complications from influenza
- Women who are pregnant
- Children receiving aspirin therapy
- People with a history of Guillain Barré Syndrome
- People with history of anaphylactic reactions to eggs or any other component of LAIV or to a previous dose of LAIV
- Close contacts of severely immunocompromised patients during those periods when those person requires a protective environment

For more information, visit the CDC website http://www.cdc.gov/flu/professionals/vaccination/live.htm.

Remember!

Patients are at risk for serious complications from wild-type influenza virus if they become infected through exposure to unvaccinated health care personnel.

This risk is well documented and must be compared with the theoretical risk of transmission of an attenuated vaccine virus from a vaccinated health care worker.